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1958 List Review

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F. S. 500

Electronics Section

Reference: COCOM Doc. 2869.

In response to the proposals made by other PC's in the first submission of list proposals, the Electronics Task Group, comprising John R. Collins, BFC; Malvern C. Talbert, Defense; and Donald S. Parris, BDSA, comments as follows:

- Item 1485 - The UK proposal would transfer a part of this item to the Munitions List and would decontrol the remainder. This would represent a substantial amount of decontrol.
- Item 1501 - The UK proposal would remove from control most airborne and ground radio and navigation equipment of the type recommended for civilian aviation by the International Civilian Aviation Organization. Many exceptions have been granted by COCOM to permit the export of equipment of this kind to Poland and Czechoslovakia.

Advanced types of airborne communication and navigation equipment would continue to be controlled. Controls would be continued on all airborne radar and many types of ground radar. However, S and X band radar of relatively low power, of the kind generally used for marine navigation and not equipped for Echo Cancellation would be decontrolled.

The German proposal is based on end-use and would require further definition for consideration.

- Item 1502 - No changes have been proposed.
- Item 1507 - The UK has proposed retaining this item as defined in IL/I.
- Item 1509 - The UK proposals for this item have been combined with their revision of 1501 above.

The German proposal to exclude radar for merchant marine is in line with the effect of the UK proposed redefinition. The German suggestion that pulse modulators, Item 1514, be considered part of a radar set parallels the Electronics Task Group's findings on this item. The other German proposals to include parts of Item 1517 and to delete sub-item (c) will require further explanation.

- Item 1510 - The only change proposed by the UK redefinition is an exception for horizontally operated fish-finding equipment. Individual exceptions have been made to permit shipments of such equipment. Thus far a satisfactory definition has not been found to exclude such types of fish-finding equipment, but there has been general agreement that it does not merit control.

The effect of the W. German proposal would also be to exclude Echo Sounders and fish-finding equipment.

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- Item 1514 - The effect of the UK redefinition would be to remove from control pulse modulators of moderate power. This revision is in line with their proposals on radar. The peak power of a pulse modulator is generally greater than the power of the radar set in which it is employed.

West Germany would combine this item with Item 1509, as stated above.

- Item 1516 - The UK would retain this item unchanged. W. Germany has proposed a redefinition which is not clear to the Task Group.

- Item 1517 - The frequencies between 470 and 585 mc and between 610 and 940 mc have been allocated internationally for UHF television. (In the U. S. the frequencies between 585 and 610 mc are also used for UHF television.) The UK proposal would, therefore, decontrol UHF TV transmitters. Their other proposals would continue controls on specialized communication equipment. The residual would be decontrolled.

The W. German proposals are stated in general terms and, therefore, cannot be discussed in detail. Their reference to developments in the region of 470-960 mcs concerns UHF television. Except for U. S. Armed Forces network stations and a few experimental stations in West Germany and the United Kingdom, it is not known that the UHF band is utilized anywhere outside the United States.

- Item 1518 - No changes proposed.

- Item 1519 - The UK would retain this item in its present form.

The W. German proposal would increase the cut-off speed from 150 to 300 bauds, or from 200 to 400 words per minute. Practically all commercial telegraph equipment operates at speeds of less than 100 words per minute. Higher speed equipment is used only in special installations and for electronic computers. Under the circumstances there seems to be no justification for the German redefinition.

Denmark has indicated that it must reserve the right to export equipment covered by Item 1519 for the maintenance of communication lines of the Great Northern Telegraph Company, Ltd. in the U.S.S.R. and Poland. Exceptions have previously been granted to Denmark to maintain the Great Northern Telegraph Company equipment.

- Item 1520 - The UK would retain this item in its present form.

West Germany would exclude relay stations for broadcast and television. Relay equipment for radio and television resembles, or is identical with, relay equipment used for strategic purposes. A satisfactory definition has not been devised that would permit shipment of broadcast or television relays and at the same time control strategic equipment.

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Item 1521 - The UK would increase the cut-off frequency to 300 mc, the beginning of the UHF region, increase bandwidth to 10 mc, and delete amplifiers operating in the ultrasonic region. Most high-grade amplifiers, however, would remain under control.

The W. German proposal is apparently intended to exclude amplifiers utilized in UHF television. Since those amplifiers are normally a part of television transmitters or receivers, it should not be necessary to redefine Item 1521 for that purpose.

Item 1523 - The UK would retain this item in its present form.

The W. German proposal would decontrol practically all telephone and telegraph communication systems. Only very advanced equipment capable of handling 600 two-way television channels would remain under control.

Denmark has indicated that it must reserve the right to export equipment covered by Item 1523 for the maintenance of communication lines of the Great Northern Telegraph Company, Ltd. in the USSR and Poland. Exceptions have previously been granted to Denmark to maintain the Great Northern Telegraph Company equipment.

Item 1524 - The UK would retain this item in its present form.

Item 1525 - The UK would retain this item in its present form.

Item 1526 - The UK would retain this item in its present form.

Item 1529(e) - The UK proposal is in line with the revision proposed by the Ad Hoc Subcommittee.

Item 1537 - Most waveguide is rigid, so the UK proposal would result in substantial decontrol. Since most waveguide is used for embargo-type equipment, the reasoning behind the UK proposal is not clear.

The German proposal to increase the frequency cut-off to 960 mcs is in line with the German suggested modification of Items 1517 and 1951 to exclude UHF television. In the present instance, their proposal would have negligible effect since most waveguides are designed to operate at frequencies above 1000 megacycles.

Item 1541 - The UK proposal would eliminate cathode-ray tubes with screen after glow longer than one-half second. It would, however, retain multi-gun tubes which were deleted by the Ad Hoc Subcommittee, and also tubes capable of a writing speed of 3000 kilometers per second. Writing speeds of cathode-ray tubes are not specified in the U.S. This item would, therefore, be difficult to control.

The German proposal to increase the afterglow time from one-half second to 10 seconds has little meaning unless the degree of decay of brightness is specified. In some tubes brightness falls off rapidly but a trace will remain for several minutes. West Germany also suggests decontrolling skiatron tubes. Since skiatron tubes no longer have any practical application, there is no reason for their control.

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- Item 1544 - The UK proposal would effectively limit coverage of crystal diodes to coaxially mounted types used for high frequency applications such as radar. It would still leave the most strategic types of diodes under control.
- Item 1545 - Both the UK and W. German proposals would exclude from control low frequency transistors of a kind generally used for civilian portable radios and similar equipment.
- Item 1548 - The UK would retain this item in its present form.
- Item 1549 - No comments were made regarding this item.
- Item 1553 - The UK would retain this item in its present form.
- Item 1555 - Both the UK and W. Germany would exclude vidicon tubes from control. A number of exceptions have already been made to permit replacement vidicon tubes to be sent to Bloc countries for use in television cameras. We are not aware of any compelling reasons why vidicon tubes should remain under control.
- Item 1558 - The UK proposal would delete subminiature tubes which, in the U. S. at least, are used mainly for military equipment. Otherwise, the definition seems compatible with present controls and the findings of the Ad Hoc Subcommittee.

The W. German proposal would decontrol subminiature tubes and would also raise the frequency cut-off from 300 to 960 mcs, probably to free tubes used for UHF television.
- Item 1559 - The UK would retain this item in its present form. W. Germany proposes to exclude thyratrons for television. To the best of our knowledge, thyratrons are not used in any TV applications. Therefore, the W. German proposal appears unacceptable.
- Item 1563 - No comments were made regarding this item.
- Item 1564 - The UK would delete this item, stating that it is already covered by Munitions List Item 11. Only computers designed for military use would be controlled under the UK proposal. This would represent a large degree of decontrol.
- Item 1568 - This item would be retained in its present form.
- Item 1572 - The UK would redefine this item, but has not as yet submitted a proposed revision.
- Item 1577 - No comments were made regarding this item.
- Item 1579 - No comments were made regarding this item.
- Item 1587 - The UK would retain this item in its present form.
- Item 1589 - No comments have been made regarding this item.
- Item 1591 - The German proposal would exclude from control practically all spectrographic equipment. The UK has not commented on this item.
- Item 1593 - The UK has proposed redefinition of this item but has not as yet submitted its redefinition for consideration.

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Item 1598 - West Germany suggests redefining this item but has not submitted a proposal.

The UK has not commented on this item.

NEW ITEMS -

- 15 - We endorse the UK proposal to add new items 15 and 16, although we are not sure they have established the proper parameters. Some temperature range should be established to control export of high temperature components. The UK proposal is extremely restrictive -- it would, for example, prohibit export of virtually all receiving tubes. At the present time, the great bulk of electronic components used in U. S. military equipments must operate satisfactorily over an ambient range of -50 or -55 degrees C to 85 degrees C, some must reach 125 degrees or 150 degrees C. High temperature components really start at 200 degrees C, so a limitation of an ambient range greater than -66 degrees C to 150 degrees would probably suffice.
- 16 - Although we know of no successful electromagnetic wave absorbing materials at the present time, there are a number of research projects on this type of electronic counter-measures that may bear fruit. Since such material would be of the highest strategic significance, it definitely should be put under control in advance of production. The limit should be dropped to 200 mc. to protect certain U.S. vital and highly classified radar systems.

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